

Appl. No.: 09/892,095

Filed: June 26, 2001

Page 7**REMARKS/ARGUMENTS**

The foregoing amendments and these remarks are responsive to the Office Action of June 3, 2003. Favorable reconsideration and allowance of the present application is respectfully requested in view of the foregoing amendments and these remarks.

Applicant would first like to thank Examiner Chen for discussing the present application with the undersigned on July 8, 2003. During the discussion, recitations of the claims that have not been addressed by the either of the Office Actions were mentioned. The claims have been amended in the manner suggested by the Examiner.

Request for Withdrawal of Finality

Applicant respectfully requests that the finality of the Office Action be withdrawn, and that the foregoing amendments be entered and fully considered along with the following arguments. In support of the withdrawal, it is noted that both of the Office Actions have overlooked meaningful recitations that have always been included in the claims, and that at least some of the overlooked recitations patentably distinguish the present invention.

In this regard, and in an effort to productively further prosecution, it is respectfully noted that the Manual of Patent Examining Procedure requires that all claim recitations be fully considered (MPEP 2143.03) and that all of the Patent Office's findings with respect to patentability be fully supported (MPEP 2144.03). That is, it is respectfully requested that all of the recitations of the claims be fully addressed and that any rejections be fully supported by documentary evidence. If a rejection is based on grounds of inherency / implicitness or "official notice," it is respectfully requested that documentary evidence / authority be provided, or as a minimum that the grounds be articulated sufficiently so that the Applicant is provided with a fair opportunity to understand the rejection.

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The Rejections / Claims

The claims have again been rejected as being obvious over U.S. 5,957,755 to LaFlamme taken alone or in view of U.S. 5,024,563 to Randall. Applicant respectfully disagrees with the rejections.

The Office Action takes the position that LaFlamme teaches applying two coating layers to a cutting tool. Even if this characterization of LaFlamme is true, to which Applicant does not concede, clearly neither LaFlamme nor Randall teach or suggest the more specific recitations of independent Claim 1. Amended Claim 1 represents cancelled Claim 4 rewritten in independent form including all of the recitations of the base claim, and it recites:

applying via a vacuum procedure a coating to at least a portion of the cutting tool that includes a cutting edge of the cutting tool, the coating including an inner hard layer and an outer friction-reducing layer over the hard layer, whereby a coated cutting tool is formed, and wherein the hard layer is harder than the friction-reducing layer and the friction-reducing layer has a lower coefficient of friction than the hard layer; and

then cutting the first workpieces, which are wood or include a substantial amount of wood, with the cutting edge of the coated cutting tool to produce the second workpieces,

wherein the applying the coating includes:

adhering the hard layer to the cutting tool, with the adhering the hard layer to the cutting tool including adhering titanium aluminum nitride to the cutting tool, and

adhering the friction-reducing layer over the hard layer, with the adhering the friction-reducing layer including adhering tungsten carbide with carbon over the hard layer. (Emphasis added).

Neither LaFlamme nor Randall mention tungsten carbide with carbon, which is specifically recited in Claim 1, and is also specifically recited in the only other independent claims, Claims 16 and 25. In contrast, LaFlamme merely mentions tungsten carbide and tungsten titanium carbide (see LaFlamme at col. 1., lines 45-46), which are not the same as tungsten carbide with carbon, which is recited by each of the independent claims.

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The Office Action has overstated the teachings of the LaFlamme patent because, with respect to the tungsten carbide and tungsten titanium carbide, LaFlamme merely indicates, with respect to manufacturing an insert, that:

Inserts can be manufactured in various ways. The most common basic materials are tungsten carbide or tungsten titanium carbide combined with a metallic binder such as cobalt. (Col. 1, lines 44-47).

Carbon is a nonmetallic element, so those of ordinary skill will understand that the above-quoted portion of LaFlamme does not teach or suggest tungsten carbide with carbon, which is recited in each of the independent claims.

It is also respectfully submitted that, in contrast to what is indicated by the Office Action, those of ordinary skill in the art will understand that the above-quoted portion of LaFlamme merely teaches that an uncoated insert can be formed from a mixture of tungsten carbide or tungsten titanium carbide and cobalt. That is, there is no teaching or suggestion in LaFlamme of using tungsten carbide or tungsten titanium carbide and cobalt, much less the claimed tungsten carbide with carbon, in a coating. In this regard, Claim 1 clearly distinguishes its coating from its underlying cutting tool.

In this regard, the only other independent claims, Claims 16 and 25, each clearly distinguish their coating and cutting tool from one another, because they each recite applying the coating after providing the cutting tool. More specifically, Claim 16, which has been amended to represent cancelled Claim 21 rewritten in independent form including all of the recitations of the base claim, recites:

providing a cutting tool having a cutting edge;
then applying via a vacuum procedure a hard coating to at least a portion of the cutting tool that includes the cutting edge;
then applying via a vacuum procedure a friction-reducing coating over the hard coating, whereby a coated cutting tool is formed, and wherein the hard coating is harder than the friction-reducing coating and the friction-reducing coating has a lower coefficient of friction than the hard coating; and

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then cutting the first workpieces, which are wood or include a substantial amount of wood, with the cutting edge of the coated cutting tool to produce the second workpieces,

wherein:

the applying via the vacuum procedure the hard coating includes adhering titanium aluminum nitride to the cutting tool, and

the applying via the vacuum procedure the friction-reducing coating over the hard coating includes adhering tungsten carbide with carbon over the hard coating. (Emphasis added).

New independent Claim 25 recites

providing a cutting tool having a cutting edge;

then applying a coating of titanium aluminum nitride to at least a portion of the cutting tool that includes the cutting edge;

then applying a coating of tungsten carbide with carbon over the titanium aluminum nitride, whereby a coated cutting tool is formed, and wherein the coating of titanium aluminum nitride is harder than the coating of tungsten carbide with carbon and the coating of tungsten carbide with carbon has a lower coefficient of friction than the coating of titanium aluminum nitride; and

then cutting the first workpieces, which are wood or include a substantial amount of wood, with the cutting edge of the coated cutting tool to produce the second workpieces. (Emphasis added).

LaFlamme and Randall also fail to teach or suggest other recitations of the independent Claims 1, 16 and 25. For example, even if Laflamme does teach a multilayer coating, to which Applicant does not concede, it clearly does not teach or suggest the recitations in Claim 1 of "applying via a vacuum procedure a coating . . . including an inner hard layer and an outer friction-reducing layer over the hard layer, . . . wherein the hard layer is harder than the friction-reducing layer and the friction-reducing layer has a lower coefficient of friction than the hard layer" It is submitted that the Randall patent does not overcome the deficiencies in the teachings of LaFlamme.

In view of the foregoing, it is respectfully submitted that the rejections of the Office Action have been overcome such that each of the independent Claims 1, 16 and 25 are in condition for immediate allowance. In case the Examiner seeks to provide new rejections, Applicant would like to reiterate from the Background section of the present application that

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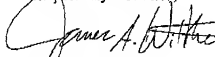
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distinctions between the woodworking industry and the metalworking industry are evidence that these industries are nonanalogous fields of art.

It is also respectfully submitted that each of the dependent Claims 2, 3, 6-11, 17-20, 23, 24 and 26-28 are in condition for immediate allowance due to their respective dependence from an allowable independent claim, and because the dependent claims further patentably distinguish the present invention. For example, each of Claims 8, 18, 24 and 27 recite that "the cutting edge of the cutting tool is steel," and both LaFlamme and Randall fail to teach or suggest this recitation.

In view of the foregoing, it is respectfully submitted that the present application is in condition for immediate allowance, and such action is solicited. If for some reason the Examiner deems that this application is not in condition for immediate allowance, it is requested that he telephone the undersigned at 704-444-1184 in an effort to expedite prosecution.

Respectfully submitted,



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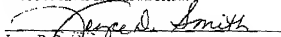
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